

WHAT IS CLAIMED IS:

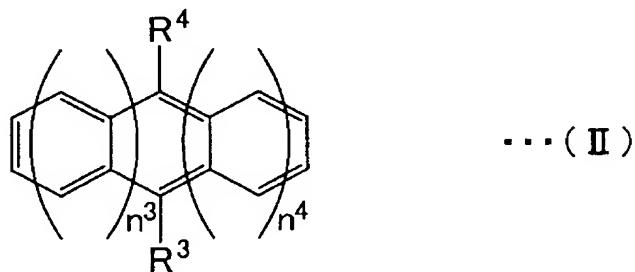
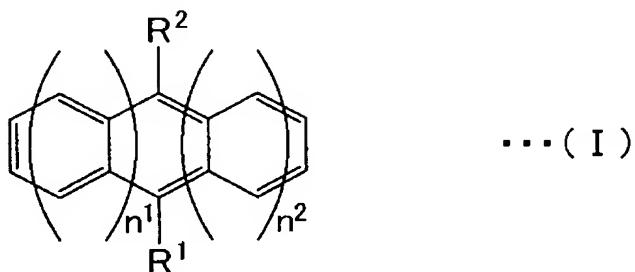
1. A film formation method, comprising:

applying at least one of light and heat to a first compound represented by formula (I) and a second compound represented by formula (II) to produce a cyclized compound by way of cycloaddition of the first compound and the second compound;

placing a liquid layer containing the cyclized compound and a solvent which can dissolve the cyclized compound on a substrate; and

applying at least one of light and heat to the liquid layer to produce a solid containing the first compound and the second compound:

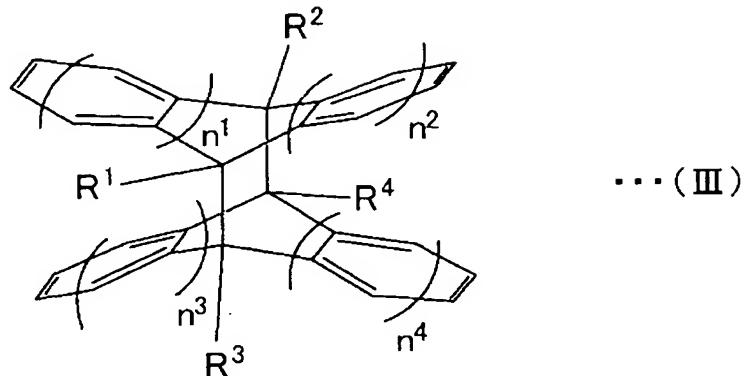
[Chemical Formula 1]



(R^1 , R^2 , R^3 , and R^4 , which may be the same or different, each having an atomic number of 1 to 18, and each containing at least one atom or moiety selected from a group A including a hydrogen atom, a halogen atom, an alkane moiety, an alkene moiety, an ether moiety, an acetal moiety, a carbonyl moiety, an amino moiety, an amide moiety, an ester moiety, a carbonate ester moiety, an imide moiety, and an acid anhydride moiety; the hydrogen atoms in the benzene nuclei may be substituted; each of n^1 , n^2 , n^3 , and n^4 being an integer of 0 or more; and at least one of n^1+n^2 and n^3+n^4 being 2 or more).

2. The film formation method according to Claim 1, the cyclized compound being represented by formula (III):

[Chemical Formula 2]



(R^1 , R^2 , R^3 , and R^4 , which may be the same or different, each having an atomic number of 1 to 18, and each containing at least one atom or moiety selected from a group A including a hydrogen atom, a halogen atom, an alkane moiety, an alkene moiety, an ether moiety, an acetal moiety, a carbonyl moiety, an amino moiety, an amide moiety, an ester moiety, a carbonate ester moiety, an imide moiety, and an acid anhydride moiety; the hydrogen atoms in the benzene nuclei may be substituted; each of n^1 , n^2 , n^3 , and n^4 being an integer of 0 or more; and at least one of n^1+n^2 and n^3+n^4 being 2 or more).

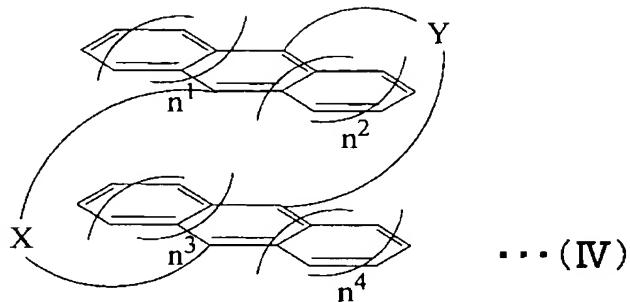
3. A film formation method, comprising:

applying at least one of light and heat to a fourth compound represented by formula (IV) to produce a cyclized compound by way of intramolecular cycloaddition of two types of aromatic moieties in the fourth compound;

placing a liquid layer containing the cyclized compound and a solvent which can dissolve the cyclized compound on a substrate; and

applying at least one of light and heat to the liquid layer to produce a solid containing the fourth compound:

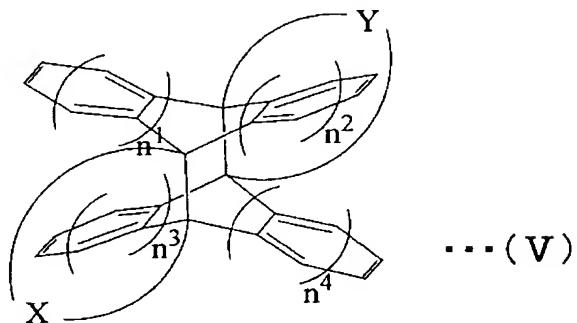
[Chemical Formula 3]



(X and Y, which may be the same or different, each having an atomic number of 2 to 18, and each containing at least one atom or moiety selected from a group A including a hydrogen atom, a halogen atom, an alkane moiety, an alkene moiety, an ether moiety, an acetal moiety, a carbonyl moiety, an amino moiety, an amide moiety, an ester moiety, a carbonate ester moiety, an imide moiety, and an acid anhydride moiety; the hydrogen atoms in the benzene nuclei may be substituted; each of n^1 , n^2 , n^3 , and n^4 being an integer of 0 or more; and at least one of n^1+n^2 and n^3+n^4 being 2 or more).

4. The film formation method according to Claim 3, the cyclized compound being represented by formula (V):

[Chemical Formula 4]



(X and Y, which may be the same or different, each having an atomic number of 2 to 18, and each containing at least one atom or moiety selected from a group A including a hydrogen atom, a halogen atom, an alkane moiety, an alkene moiety, an ether moiety, an acetal moiety, a carbonyl moiety, an amino moiety, an amide moiety, an ester moiety, a carbonate ester moiety, an imide moiety, and an acid anhydride moiety; the hydrogen atoms in the benzene

nuclei may be substituted; each of n^1 , n^2 , n^3 , and n^4 being an integer of 0 or more; and at least one of n^1+n^2 and n^3+n^4 being 2 or more).

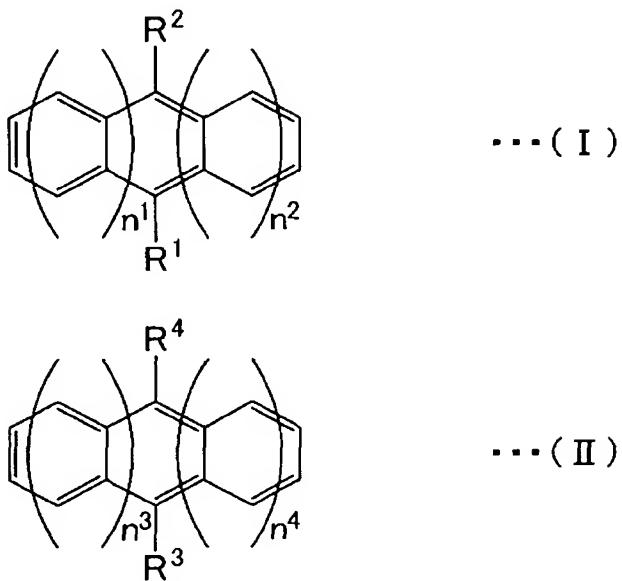
5. A raw material liquid, comprising:

a first compound represented by formula (I);

a second compound represented by formula (II); and

a solvent:

[Chemical Formula 5]



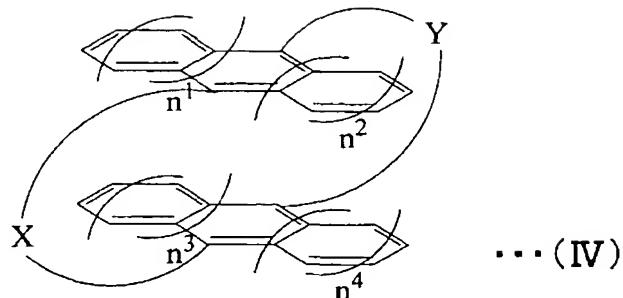
(R^1 , R^2 , R^3 , and R^4 , which may be the same or different, each having an atomic number of 1 to 18, and each containing at least one atom or moiety selected from a group A including a hydrogen atom, a halogen atom, an alkane moiety, an alkene moiety, an ether moiety, an acetal moiety, a carbonyl moiety, an amino moiety, an amide moiety, an ester moiety, a carbonate ester moiety, an imide moiety, and an acid anhydride moiety; the hydrogen atoms in the benzene nuclei may be substituted; each of n^1 , n^2 , n^3 , and n^4 being an integer of 0 or more; and at least one of n^1+n^2 and n^3+n^4 being 2 or more).

6. A raw material liquid, comprising:

a fourth compound represented by formula (IV) ; and

a solvent:

[Chemical Formula 6]



(X and Y, which may be the same or different, each having an atomic number of 2 to 18, and each containing at least one atom or moiety selected from a group A including a hydrogen atom, a halogen atom, an alkane moiety, an alkene moiety, an ether moiety, an acetal moiety, a carbonyl moiety, an amino moiety, an amide moiety, an ester moiety, a carbonate ester moiety, an imide moiety, and an acid anhydride moiety; the hydrogen atoms in the benzene nuclei may be substituted; each of n^1 , n^2 , n^3 , and n^4 being an integer of 0 or more; and at least one of n^1+n^2 and n^3+n^4 being 2 or more).

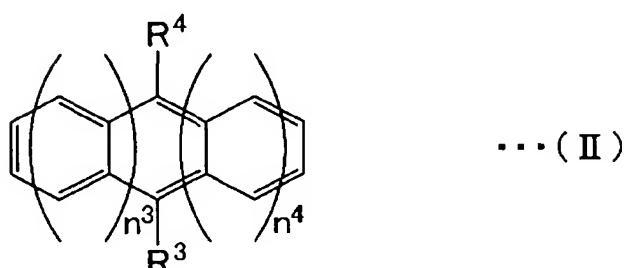
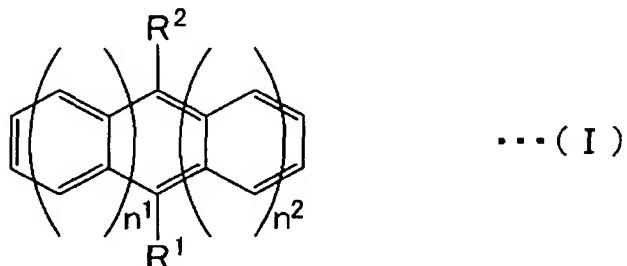
7. A solution, comprising:

a cyclized compound produced by the cycloaddition of a first compound represented by formula (I);

a second compound represented by formula (II); and

a solvent which can dissolve the cyclized compound:

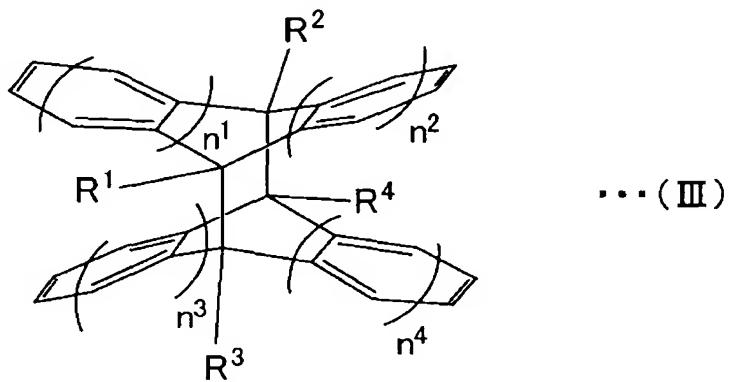
[Chemical Formula 7]



(R^1 , R^2 , R^3 , and R^4 , which may be the same or different, each having an atomic number of 1 to 18, and each containing at least one atom or moiety selected from a group A including a hydrogen atom, a halogen atom, an alkane moiety, an alkene moiety, an ether moiety, an acetal moiety, a carbonyl moiety, an amino moiety, an amide moiety, an ester moiety, a carbonate ester moiety, an imide moiety, and an acid anhydride moiety; the hydrogen atoms in the benzene nuclei may be substituted; each of n^1 , n^2 , n^3 , and n^4 being an integer of 0 or more; and at least one of n^1+n^2 and n^3+n^4 being 2 or more).

8. The solution according to Claim 7, the cyclized compound being represented by formula (III):

[Chemical Formula 8]



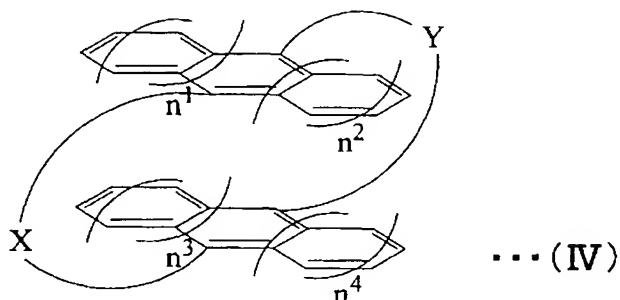
(R^1 , R^2 , R^3 , and R^4 , which may be the same or different, each having an atomic number of 1 to 18, and each containing at least one atom or moiety selected from a group A including a hydrogen atom, a halogen atom, an alkane moiety, an alkene moiety, an ether moiety, an acetal moiety, a carbonyl moiety, an amino moiety, an amide moiety, an ester moiety, a carbonate ester moiety, an imide moiety, and an acid anhydride moiety; the hydrogen atoms in the benzene nuclei may be substituted; each of n^1 , n^2 , n^3 , and n^4 being an integer of 0 or more; and at least one of n^1+n^2 and n^3+n^4 being 2 or more).

9. A solution, comprising:

a cyclized compound produced by the intramolecular cycloaddition of a fourth compound represented by formula (IV); and

a solvent which can dissolve the cyclized compound:

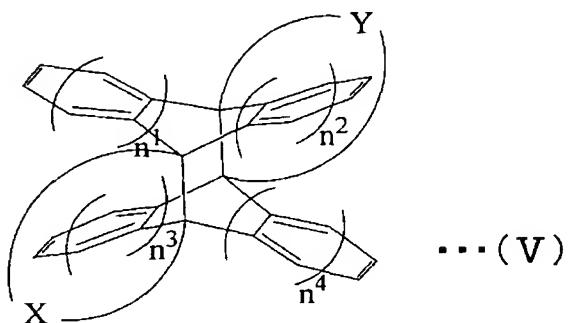
[Chemical Formula 9]



(X and Y, which may be the same or different, each having an atomic number of 2 to 18, and each containing at least one atom or moiety selected from a group A including a hydrogen atom, a halogen atom, an alkane moiety, an alkene moiety, an ether moiety, an acetal moiety, a carbonyl moiety, an amino moiety, an amide moiety, an ester moiety, a carbonate ester moiety, an imide moiety, and an acid anhydride moiety; the hydrogen atoms in the benzene nuclei may be substituted; each of n^1 , n^2 , n^3 , and n^4 being an integer of 0 or more; and at least one of n^1+n^2 and n^3+n^4 being 2 or more).

10. The solution according to Claim 9, the cyclized compound being represented by formula (V):

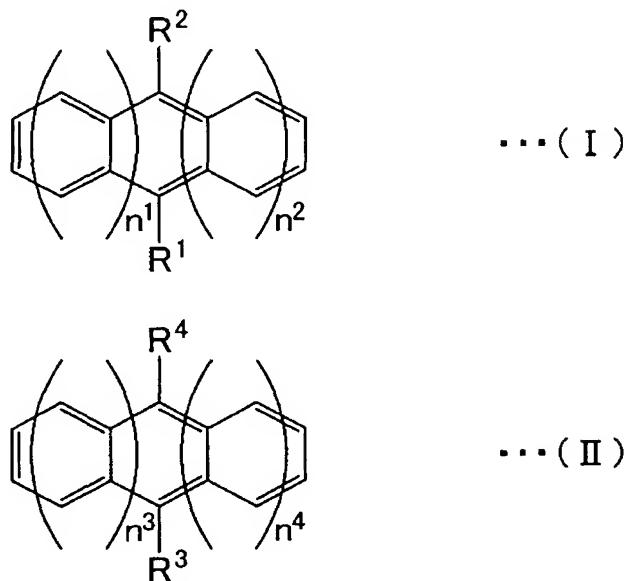
[Chemical Formula 10]



(X and Y, which may be the same or different, each having an atomic number of 2 to 18, and each containing at least one atom or moiety selected from a group A including a hydrogen atom, a halogen atom, an alkane moiety, an alkene moiety, an ether moiety, an acetal moiety, a carbonyl moiety, an amino moiety, an amide moiety, an ester moiety, a carbonate ester moiety, an imide moiety, and an acid anhydride moiety; the hydrogen atoms in the benzene nuclei may be substituted; each of n^1 , n^2 , n^3 , and n^4 being an integer of 0 or more; and at least one of n^1+n^2 and n^3+n^4 being 2 or more).

11. A cyclized compound produced by the cycloaddition of a first compound represented by formula (I) and a second compound represented by formula (II) by the action of at least one of light and heat:

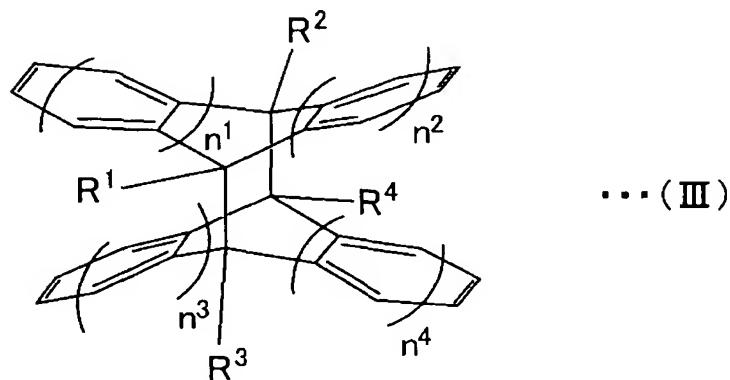
[Chemical Formula 11]



(R^1 , R^2 , R^3 , and R^4 , which may be the same or different, each having an atomic number of 1 to 18, and each containing at least one atom or moiety selected from a group A including a hydrogen atom, a halogen atom, an alkane moiety, an alkene moiety, an ether moiety, an acetal moiety, a carbonyl moiety, an amino moiety, an amide moiety, an ester moiety, a carbonate ester moiety, an imide moiety, and an acid anhydride moiety; the hydrogen atoms in the benzene nuclei may be substituted; each of n^1 , n^2 , n^3 , and n^4 being an integer of 0 or more; and at least one of n^1+n^2 and n^3+n^4 being 2 or more).

12. A cyclized compound represented by formula (III):

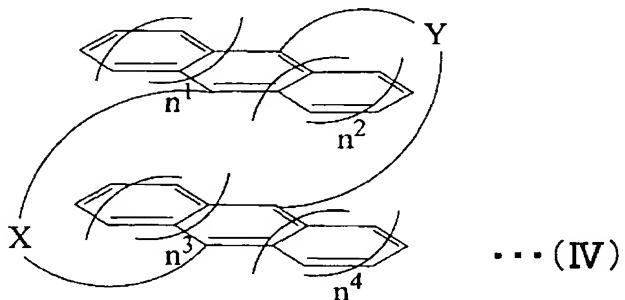
[Chemical Formula 12]



(R^1 , R^2 , R^3 , and R^4 , which may be the same or different, each having an atomic number of 1 to 18, and each containing at least one atom or moiety selected from a group A including a hydrogen atom, a halogen atom, an alkane moiety, an alkene moiety, an ether moiety, an acetal moiety, a carbonyl moiety, an amino moiety, an amide moiety, an ester moiety, a carbonate ester moiety, an imide moiety, and an acid anhydride moiety; the hydrogen atoms in the benzene nuclei may be substituted; each of n^1 , n^2 , n^3 , and n^4 being an integer of 0 or more; and at least one of n^1+n^2 and n^3+n^4 being 2 or more).

13. A cyclized compound produced by the intramolecular cycloaddition of a fourth compound represented by formula (IV) by the action of at least one of light and heat:

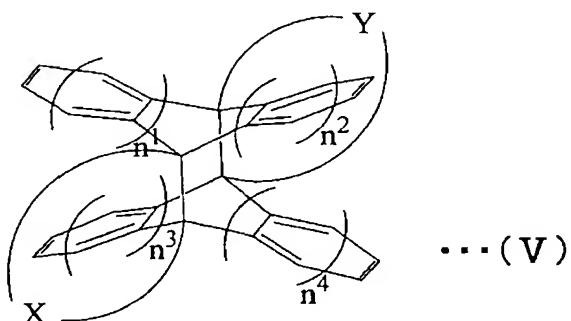
[Chemical Formula 13]



(X and Y, which may be the same or different, each having an atomic number of 2 to 18, and each containing at least one atom or moiety selected from a group A including a hydrogen atom, a halogen atom, an alkane moiety, an alkene moiety, an ether moiety, an acetal moiety, a carbonyl moiety, an amino moiety, an amide moiety, an ester moiety, a carbonate ester moiety, an imide moiety, and an acid anhydride moiety; the hydrogen atoms in the benzene nuclei may be substituted; each of n^1 , n^2 , n^3 , and n^4 being an integer of 0 or more; and at least one of n^1+n^2 and n^3+n^4 being 2 or more).

14. A cyclized compound represented by formula (V):

[Chemical Formula 14]



(X and Y, which may be the same or different, each having an atomic number of 2 to 18, and each containing at least one atom or moiety selected from a group A including a hydrogen atom, a halogen atom, an alkane moiety, an alkene moiety, an ether moiety, an acetal moiety, a carbonyl moiety, an amino moiety, an amide moiety, an ester moiety, a carbonate ester moiety, an imide moiety, and an acid anhydride moiety; the hydrogen atoms in the benzene nuclei may be substituted; each of n¹, n², n³, and n⁴ being an integer of 0 or more; and at least one of n¹+n² and n³+n⁴ being 2 or more).

15. A method for forming an organic semiconductor film, comprising:
using the film formation method according to Claim 1.
16. A method for fabricating a semiconductor device, comprising:
using the method for forming an organic semiconductor film according to
Claim 15.